REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

After entry of the present Amendment, Claims 1-4 are pending in the present application. Claims 1-4 are amended by the present response. No new matter is added.

In the outstanding Office Action, Claim 1 was rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 5,546,429 to Chiasson et al. (herein "Chiasson"); Claim 3 was rejected under 35 U.S.C. § 102(e) as anticipated by U.S. Patent No. 6,137,824 to Liu; Claim 4 was rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 5,701,333 to Okanoue et al. (herein "Okanoue"); and Claim 2 was allowed.

Applicant thanks the Examiner for the indication of allowable subject matter.

Applicant and Applicant's representatives thank Examiners Meek and Ghebretinsae for the courtesy of a personal interview with Applicant's representatives on October 18, 2005. During the interview, the rejections of Claims 1, 3, and 4 were discussed. The Examiners indicated they would further consider the rejections in view of a filed response.

The Official Action rejected Claim 1 under 35 U.S.C. § 102(b) as anticipated by Chiasson. Applicants respectfully traverse this rejection.

Amended independent Claim 1 is directed to a radio communication receiver including *inter alia,* soft-decision output equalizers in number P (where P is a natural number ***more than one***) each of which makes a soft decision on the digital signal output by the corresponding A/C converter and a combining unit which ***sums up the results of the soft-decisions by the soft decision output equalizers*** and outputs the results as a soft-decision value.

Chiasson describes a communication system with a diversity receiver portion (104) to detect and decode a transmitted signal. A weighing parameter is calculated (174) for each

branch (172 and 170) and the branches (180 and 182) are diversity combined (164). Chiasson does not disclose or suggest more than one soft-decision output equalizer or summing up the results of the soft-decision output equalizers.

Therefore, Chiasson does not disclose or suggest soft-decision output equalizers in number P (where P is a natural number ***more than one***) each of which makes a soft decision on the digital signal output by the corresponding A/D converter and a combining unit which ***sums ups the results of the soft decision by the soft-decision output equalizers*** and outputs the results as a soft-decision value, as recited in amended Claim 1.

Accordingly, Applicants respectfully requests that the rejection of Claim 1 under 35 U.S.C. § 102 be withdrawn.

The Official Action rejected Claim 3 under 35 U.S.C. § 102(e) as anticipated by Liu.

Independent claim 3 is directed to a radio communication receiver including, *inter alia*, noise-power estimating units in number P each of which ***estimates noise power*** of the digital signal output by the corresponding A/D converter and a combining unit which ***divides results of the soft decisions by corresponding noise power respectively***, and combines the results of the division to output a soft-decision value.

Liu describes a method for estimating signal quality. As depicted in Figs. 3 and 4, a correlator (303) forms branch correlation vectors (101-106) by comparing the received pre-processed signal (312) with a known matrix.[1] The correlation vectors are used to determine a signal quality estimate by calculating the difference or relation of correlation vectors (313, 314, 401) in comparing means (307).[2] Post-processing means (308) combines the signal quality estimate (308) with the correlation vectors (101-106).[3] The post-processing means (308) may include a diversity combing means, a deinterleaving means and a Viterbi detector,

[1] Lui, Column 1, lines 13-23 and Column 8, lines 54-56.
[2] Lui, Column 8, lines 60-67 and Column 9, lines 43-50.
[3] Lui, Column 9, lines 5-9 and lines 51-54.

but Liu does not disclose or suggest dividing the correlation vectors by the corresponding signal quality estimate.[4]

Furthermore, the outstanding Official Action states that Lui discloses noise-power estimating units in number P each of which estimates noise power of the digital signal output by the corresponding A/D converter.[5] However, Lui only describes means (304) that determine the highest value of the correlation vector, means (400) that form the mean value of all but the highest correlation value of the correlation vector, and means (307) that form a signal quality estimate typically by calculating the difference or relation between highest value and the mean value.[6]

Therefore, Lui does not disclose or suggest a radio communication receiver including, *inter alia*, noise-power estimating units in number P each of which ***estimates noise power*** of the digital signal output by the corresponding A/D converter and a combining unit which ***divides results of the soft decisions by corresponding noise power respectively*** and combines the results of the division to output a soft-decision value, as recited in independent Claim 3.

Accordingly, Applicant respectfully requests that the rejection of Claim 3 under 35 U.S.C. § 102 be withdrawn.

The Official Action rejected Claim 4 under 35 U.S.C. § 102(b) as anticipated by Okanoue.

Independent Claim 4 is directed to a radio communication receiver that includes, *inter alia*, "soft-decision output equalizers which ***makes a soft-decision... based on common reliability information***" (emphasis added) and an "error correcting unit which performs error correction processing with respect to the soft-decision value output by the combining unit, ***generates reliability information of decoded bits, and feeds back the reliability information to the soft-decision output equalizers***" (emphasis added).

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[4] Lui, Column 8, lines 50-51 and Column 9, lines 31-32.
[5] Official Action at paragraph 2.
[6] Lui, Column 9, lines 38-47.

In Okanoue, as shown in Fig. 3, branch metric calculation circuits (64-69) calculate a branch metric, represented by a branch metric signal, for each received signal in response to estimated impulse response signals.[7] The calculated branch metrics are combined in the branch metric combining circuit (71) to produce a combined branch metric.[8] A Viterbi processor (72) uses the combined branch metric to produce a decision signal based upon on maximum likelihood sequence estimation.[9] The decision signal is then feed back to the synchronization establishing circuit (73) for synchronizing the estimated impulse response signals.[10] Okanoue does not disclose or suggest that the decision signal includes reliability information. Moreover, the decision signal feed back to the synchronization establishing circuit (73) is only used for synchronization.

Therefore, Okanoue does not disclose or suggest a radio communication receiver that includes, *inter alia*, "soft-decision output equalizers in number P each of ***which makes a soft decision*** on the digital signal output by the corresponding A/D converter ***based on common reliability information***" and "an error correcting unit which performs error correction processing with respect to the soft-decision value output by the combining unit, ***generates reliability information of decoded bits, and feeds back the reliability information to the soft-decision output equalizers***," as recited in independent Claim 4.

Accordingly, Applicant respectfully requests that the rejection under 35 U.S.C. § 102 be withdrawn.

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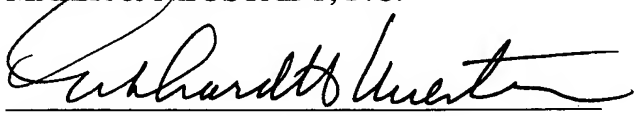
[7] Okanoue, Column 5, lines 60-67 and Column 6, lines 1-20.
[8] Okanoue, Column 6, lines 21-26.
[9] Okanoue, Column 6, lines 26-30.
[10] Okanoue, Column 6, lines 35-38.

Consequently, in light of the above discussion and in view of the present amendment, the present application is believed to be in condition for allowance and an early and favorable action to that effect is respectfully requested.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



Eckhard H. Kuesters
Attorney of Record
Registration No. 28,870

Customer Number
22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 06/04)

EHK:JD:dnf
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